Crowd-AI Sensing Based Traffic Analysis for Ho Chi Minh City Planning Simulation

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Problems

- Ho Chi Minh City (HCMC) needs resources to solve infrastructure problems.
- Monitoring staff watch traffic activities from thousands of cameras installed on streets in HCMC.

Intellectual Merits

The intellectual merits include the novelty of combining analysed data via computer vision to feed into a simulator for city planning. We apply state-of-the-art computer vision algorithms to analyze the traffic. The analyzed data later is used for the city planning simulator.

Project Activities

Traffic Analysis: Data Collection, Data Annotation, Traffic Analysis, Vehicle Counting
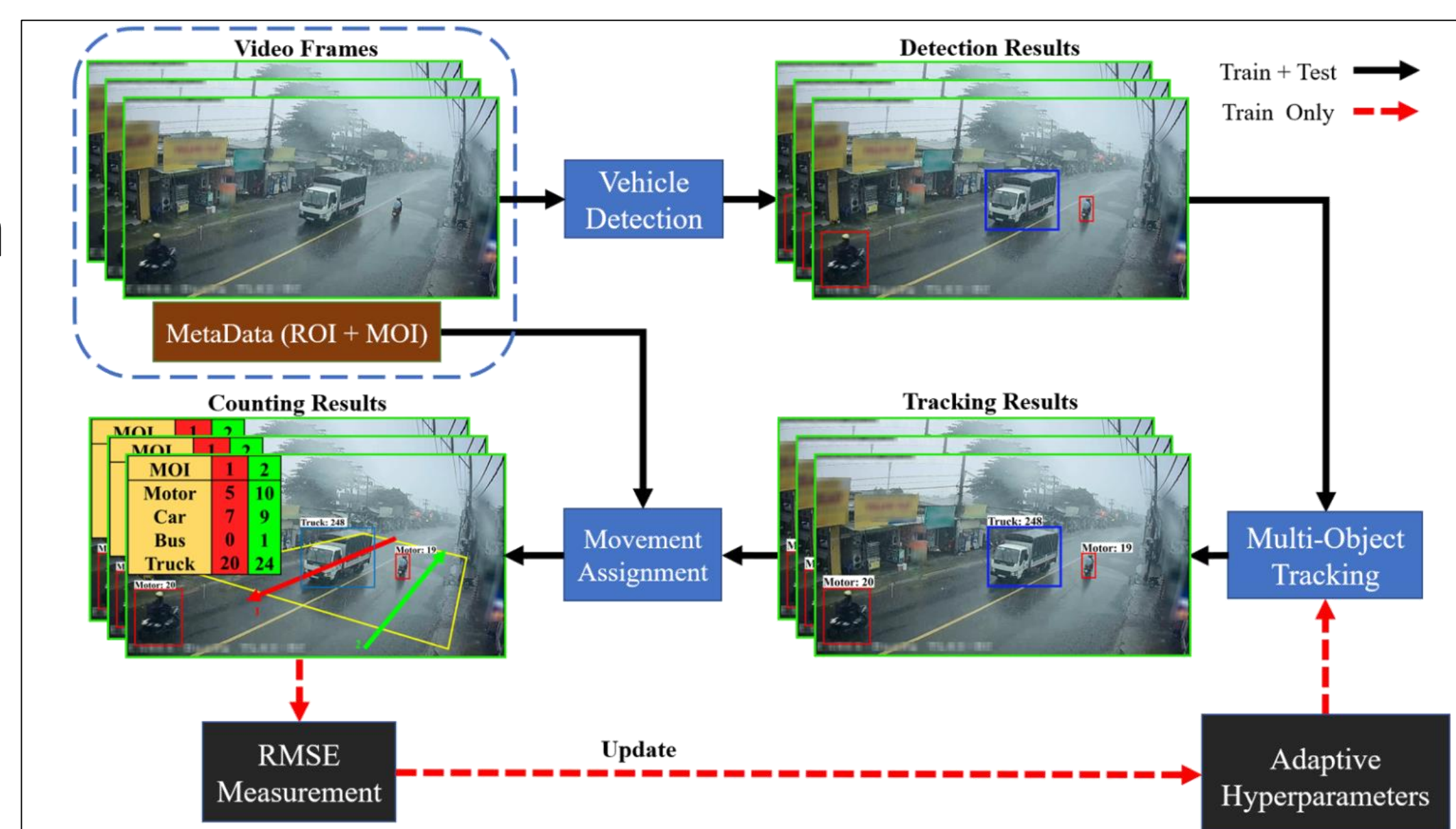
City Planning Simulation: Object Modeling, Scene Modeling, Traffic Simulation
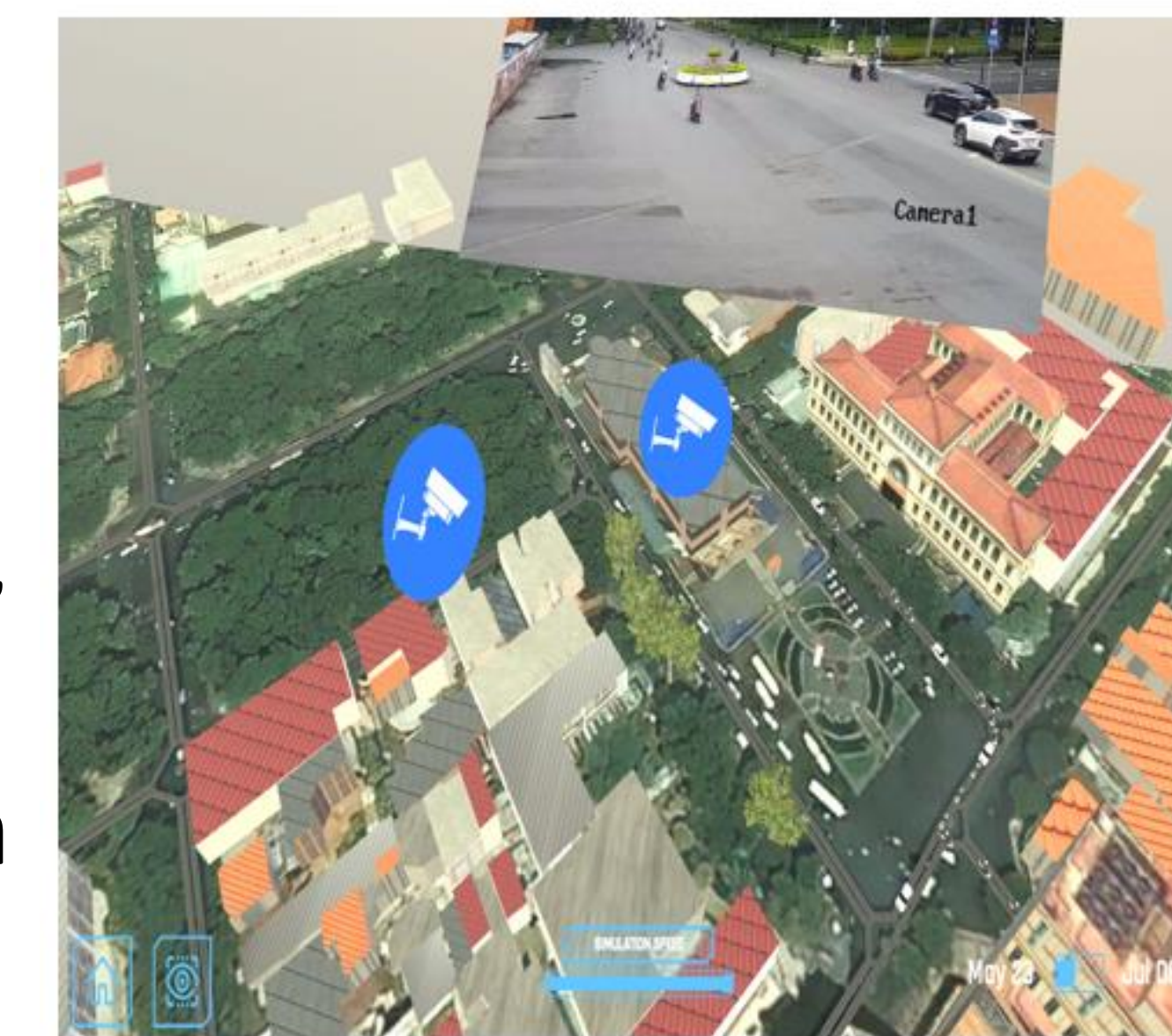
Publication (21)

- 11 journal articles
- 8 conference papers
- 2 workshop papers

Broader Impact

The project will advance the computer vision research field by providing new solutions for traffic analysis.

The simulator will aid the city authorities in HCMC to seek drastic improvement to the existing infrastructure.

Sustainability

The collected data and the computational model developed from this project will be used for Ho Chi Minh City and other cities in Asia. In addition, the outcomes of this project can be used in the US side.

Next steps

We will integrate the traffic anomaly analysis such as traffic congestion, flood, traffic violation.

We will render the city traffic simulator in the virtual environment.

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